

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Simplifying Radicals:**

Simplify each radical expression completely. Give exact answers only.

***NO CALCULATOR USE!***

1. $\sqrt{500}$	2. $\sqrt{60x^2y^3}$	2. $(\sqrt{30})(\sqrt{6})$
4. $\frac{\sqrt{7}}{\sqrt{8}}$	5. $\frac{\sqrt{3}}{\sqrt{11}}$	6. $\frac{\sqrt{15}}{\sqrt{2x}}$
7. $-3\sqrt{6} + 8\sqrt{6}$	8. $\sqrt{18} + \sqrt{2}$	9. $4\sqrt{5} - 2\sqrt{45}$
10. $\sqrt{3}(\sqrt{27} + 1)$	11. $(4 - \sqrt{13})(9 + \sqrt{13})$	12. $\frac{8}{\sqrt{7} - \sqrt{3}}$

13. $\sqrt{40} + \sqrt{90}$	14. $3\sqrt{2}(2 + \sqrt{6})$	15. $\sqrt{12} - 4\sqrt{75} - \sqrt{36}$
16. $\frac{2\sqrt{12} + 3\sqrt{6}}{\sqrt{9} - \sqrt{6}}$	17. $(\sqrt{7} + \sqrt{8})^2$	18. $4\sqrt{50} - 7\sqrt{18}$
19. $\sqrt{18} + \frac{3}{\sqrt{2}}$	20. $\frac{\sqrt{28}}{3} + \frac{3}{\sqrt{7}}$	21. $\frac{\sqrt{5} + \sqrt{10} - \sqrt{15}}{\sqrt{10} - \sqrt{5}}$